

Mineral Industry Surveys

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MARKETABLE PHOSPHATE ROCK—CROP YEAR 1998

U.S. production of marketable phosphate rock decreased 6% to 43.4 million metric tons in Crop Year 1998 (July 1, 1997-June 30, 1998) compared with 46.1 million tons in Crop Year 1997 according to the U.S. Geological Survey (USGS).

The data for this report are collected through monthly and semi-annual surveys of U.S. phosphate rock producers. All ten companies that produced phosphate rock in the United States participated in the voluntary surveys, representing 100% of the production, sold or used, and value data shown in the tables. Trade data were provided by the U.S. Bureau of the Census.

Marketable phosphate rock sold or used, including exports, was 42.6 million tons, nearly the same as in Crop Year 1997. Producers stocks decreased slightly nationwide, but stock changes varied widely on a regional basis. Stocks in Florida and North Carolina decreased slightly, while stocks in Idaho and Utah dropped 16%. Ending stocks represented slightly more than two months of average production in Crop Year 1998. The average value of marketable phosphate rock sold or used in the United States increased to \$25.91 per ton.

USGS cannot publish detailed export data for phosphate rock furnished by domestic producers because of proprietary data requirements. Exports data, as reported by Census, decreased from

1.6 million tons in Crop Year 1997 to 236,000 tons in Crop Year 1998. Exports of phosphate rock have reduced substantially over the past several years because producers have switched emphasis to exporting higher value fertilizer materials.

During Crop Year 1998, imports of phosphate rock were estimated at 1.73 million tons, slightly lower than Crop Year 1997. Import data were estimated based upon data provided to the USGS by the single producer in Morocco and from Census for other countries. Much of the import data from Morocco, the major supplier to the United States, were suppressed by Census.

Nearly 90% of phosphate rock is consumed in the manufacturing of fertilizers, with diammonium phosphate the most widely produced material. The remainder is used to produce animal feed supplements and elemental phosphorus. Domestic consumption of phosphatic fertilizers has remained steady over the past decade. Fluctuations can occur from year to year because of factors such as weather and grain inventories, but overall, the market is considered mature.

Exports of phosphate fertilizer determine the demand for phosphate rock. Exports continued to increase in Crop Year 1998, driven by growing demand in Asia. Therefore, consumption of phosphate rock increased in Crop Year 1998.

TABLE 1
SALIENT U.S. PHOSPHATE ROCK STATISTICS 1/

(Thousand metric tons and thousand dollars unless otherwise specified)

| | Crop year 2/ | |
|------------------------------------|--------------|-------------|
| | 1997 | 1998 |
| Mine production (crude ore) | 174,000 | 162,000 |
| Marketable production | 46,100 | 43,400 |
| P2O5 content | 14,100 | 12,600 |
| Value | \$1,090,000 | \$1,100,000 |
| Average, dollars per metric ton 3/ | \$23.70 | \$25.36 |
| Sold or used by producers 4/ | 43,200 | 42,600 |
| P2O5 content | 12,700 | 12,400 |
| Value 5/ | \$1,030,000 | \$1,100,000 |
| Average, dollars per metric ton | \$23.70 | \$25.91 |
| Exports 6/ | 1,600 | 236 |
| P2O5 content | NA | NA |
| Value | NA | NA |
| Average, dollars per metric ton 7/ | \$31.28 | \$50.61 |
| Imports for consumption e/ 8/ | 1,810 | 1,720 |
| C.i.f. value e/ | \$105,000 | \$78,700 |
| Average, dollars per metric ton | \$57.91 | \$45.76 |
| Consumption e/ 9/ | 43,400 | 44,300 |
| Stocks, June, 30: Producers | 7,790 | 7,520 |

e/ Estimated. NA Not available.

1/ Data are rounded to three significant digits; except prices.

2/ July 1-June 30.

3/ Average value is based on sold or used values.

4/ Includes domestic sales and exports.

5/ Total value of all domestic and export sales.

6/ Source: Bureau of the Census.

7/ Value of exports reported to the U. S. Geological Survey by companies.

8/ Some phosphate rock import tonnage and value were suppressed by the Bureau of the Census. Estimates are based on reports from the Bureau of the Census and the Moroccan phosphate rock producer.

9/ Expressed as sold or used plus imports minus exports.

TABLE 2
PRODUCTION OF PHOSPHATE ROCK IN THE UNITED STATES, BY REGION 1/

(Thousand metric tons and thousand dollars)

| Period and Region | Mine production (Crude ore) | | Marketable production | | | Ending stocks, rock |
|----------------------------|--------------------------------|-----------------|-----------------------|-----------------|-----------|---------------------------|
| | | | Beneficiated | | | |
| | Rock | P2O5 content | Rock | P2O5 content | Value 2/ | |
| Crop year 1997 | 174,000 | 21,300 | 46,100 | 14,100 | 1,090,000 | 7,790 |
| Crop year 1998: | | | | | | |
| July-December, 1997: | | | | | | |
| Florida and North Carolina | 72,100 | 7,970 | 17,300 | 5,030 | 447,000 | 6,370 |
| Idaho and Utah | 4,790 | 1,230 | 4,170 | 1,190 | 74,300 | 1,540 |
| Total | 76,900 | 9,200 | 21,500 | 6,220 | 521,000 | 7,910 |
| January-June, 1998: | | | | | | |
| Florida and North Carolina | 81,700 | 6,450 | 19,200 | 5,580 | 509,000 | 6,180 |
| Idaho and Utah | 3,050 | 756 | 2,620 | 768 | 70,000 | 1,340 |
| Total | 84,800 | 7,210 | 21,900 | 6,350 | 579,000 | 7,520 |
| Grand total | 162,000 | 16,400 | 43,400 | 12,600 | 1,100,000 | XX |

XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Calculated value based on the sold or used value.

TABLE 3
PHOSPHATE ROCK SOLD OR USED BY PRODUCERS
IN THE UNITED STATES, BY GRADE 1/

(Thousand metric tons and thousand dollars)

| Period and grade (percent BPL 2/ content) | Rock | P2O5 content | Value 3/ |
|---|--------|-----------------|-------------|
| Crop year 1997 | 43,200 | 12,700 | \$1,030,000 |
| Crop year 1998: | | | |
| July-December 1997: | | | |
| 60 to less than 66 | 17,100 | 4,920 | 436,000 |
| Other 4/ | 3,800 | 1,110 | 97,900 |
| Total | 20,900 | 6,030 | 534,000 |
| January-June 1998: | | | |
| 60 to less than 66 | 16,500 | 4,840 | 414,000 |
| Other 4/ | 5,210 | 1,480 | 155,000 |
| Total | 21,700 | 6,320 | 569,000 |
| Grand total | 42,600 | 12,400 | 1,100,000 |

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ 1.0% BPL (bone phosphate of lime or tricalcium phosphate) = 0.458% P2O5.

3/ F.o.b. mine.

4/ Includes less than 60% and greater than 70% BPL content.

TABLE 4
PHOSPHATE ROCK SOLD OR USED BY
PRODUCERS IN THE UNITED STATES,
BY USE 1/

(Thousand metric tons)

| Period and use | Rock | P2O5 content |
|---------------------|--------|-----------------|
| Crop year 1997 | 43,200 | 12,700 |
| Crop year 1998: | | |
| July-December, 1997 | | |
| Domestic: | | |
| Agricultural | 19,500 | 5,650 |
| Industrial | W | W |
| Subtotal | W | W |
| Exports: 2/ | W | W |
| Total | 20,900 | 6,030 |
| January-June, 1998 | | |
| Domestic: | | |
| Agricultural | 20,300 | 5,930 |
| Industrial | W | W |
| Subtotal | W | W |
| Exports: 2/ | W | W |
| Total | 21,700 | 6,320 |
| Grand total | 42,600 | 12,400 |

W Withheld to avoid disclosing company proprietary data; included in "Total."

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Exports reported to the U.S. Geological Survey by companies.

TABLE 5
VALUE OF U. S. PHOSPHATE ROCK, BY GRADE

(Dollars per metric ton, f.o.b. mine)

| Grade (percent BPL 1/ content) | Crop year 1997 | | | Crop year 1998 | | |
|-----------------------------------|----------------|--------|---------|----------------|--------|---------|
| | Domestic | Export | Average | Domestic | Export | Average |
| 70 to less than 72 | W | W | W | W | W | W |
| 66 to less than 70 | 28.32 | 49.61 | 28.94 | 30.59 | W | 31.07 |
| 60 to less than 66 | 22.72 | W | 22.56 | 25.29 | W | 25.33 |
| Weighted average | 23.89 | 31.28 | 23.70 | 25.80 | 50.61 | 25.91 |

W Withheld to avoid disclosing company proprietary data; included in weighted average.

1/ 1.0% BPL (bone phosphate of lime or tricalcium phosphate) = 0.458% P₂O₅.